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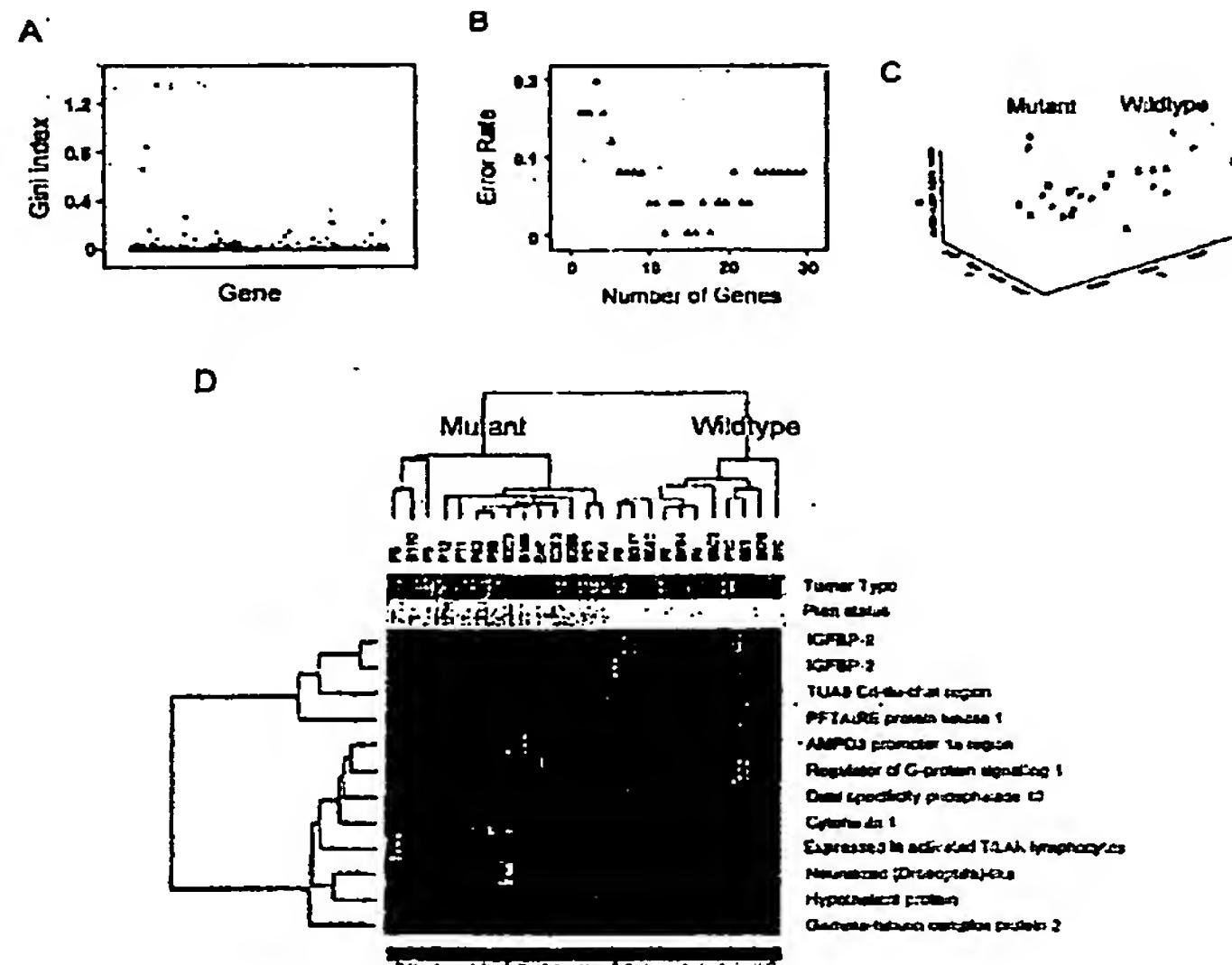
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(54) Title: MOLECULAR SIGNATURE OF THE PTEN TUMOR SUPPRESSOR



(57) Abstract: The present invention relates to the identification a molecular signature for PTEN tumor suppressor. The molecular signature comprising a gene or genes that are of use for diagnosis, prognosis, drug research and development and therapeutics. Specifically, the present invention relates to identification of IGFBP2 gene, its mRNA and/or protein products that closely associate with PTEN mutations. The present invention further demonstrates that IGFBP2 expression is negatively regulated by PTEN, positively regulated by PI3K and Akt activation, that IGFBP2 plays a functional role in the PTEN signaling and is required for Akt transformation. The use of IGFBP2 gene, its gene product such as its RNA transcript, protein and molecular probes in diagnosis, prognosis, drug discovery and validation and therapeutic target and therapeutics is also contemplated.